

APPLIED MATHEMATICS AND COMPUTATION

VOLUME 27

DONALD A. JAMESON, GUEST EDITOR

- Introduction: Workshop on Vector and Parallel Processing in
Landscape Dynamics1

RICHARD M. CASEY AND DONALD A. JAMESON

- Parallel and Vector Processing in Landscape Dynamics3

LAWRENCE E. BAND AND ERIC F. WOOD

- Strategies for Large-Scale, Distributed Hydrologic Simulation23

MONICA GOIGEL TURNER

- A Spatial Simulation Model of Land Use Changes in a Piedmont
County in Georgia39

L. FAHRIG

- A General Model of Populations in Patchy Habitats53

BRUCE T. MILNE

- Measuring the Fractal Geometry of Landscapes67

P. HOGEWEG

- Cellular Automata as a Paradigm for Ecological Modeling81

CLEMENS-AUGUST THOLE AND ULRICH TROTTEMBERG

- A Short Note on Standard Parallel Multigrid Algorithms for 3D
Problems101

A. L. FYMAT, M. A. GREENFIELD, S. C. LO AND D. FINDLEY

- Optimization of the Radiotherapy Treatment Plan117

N. I. IOAKIMIDIS

- Application of Quadrature Rules to the Determination of Plane
Equipotential Lines and Other Curves Defined by Harmonic
Functions147

HONORATA SOSNOWSKA

- Global Stability in Bounded Sets: Application to a Queueing
Model of a Market in a Shortage Economy155

WINFRIED GLEIBNER

- The Spread of Epidemics167

NIKITAS ASSIMAKOPOULOS	
A Waiting System with Two Stages	173
S. ELAYDI AND M. RAMA MOHANA RAO	
Lipschitz Stability for Nonlinear Volterra	
Integrodifferential Systems	191
M. A. GIL, J. FERNÁNDEZ, AND I. MARTÍNEZ	
The Choice of Sample Size in Estimating Mutual Information	201
H. B. SAID	
C ¹ Interpolation on a Polygon	217
P. A. VENKATACHALAM AND S. ARUMUGAM	
Program Termination Using Z-Transform Theory	231
JÓHN MILLER	
Finding the Zeros of an Analytic Function	243
U. BULGARELLI, M. M. CERIMELE, AND A. ZARETTI	
A Numerical Method for a Mathematical Model	
in Gravitational Hydrodynamics	251
PAUL G. BAO AND JOHN G. ROKNE	
Low Complexity k -Dimensional Taylor Forms	265
RAPHAËLE HERBIN, STEPHANE GERBI AND VIJAY SONNAD	
Parallel Implementation of a Multigrid Method on the	
Experimental ICAP Supercomputer	281
W. H. ENRIGHT, K. R. JACKSON, S. P. NORSETT	
AND P. G. THOMSEN	
Effective Solution of Discontinuous IVPs Using a	
Runge-Kutta Formula Pair with Interpolants	313
L. W. WHITE	
Estimation of Flexural Rigidity in a Kirchhoff Plate Model	337

